

IN THE CLAIMS:

Please amend the claims, as follows:

Claims 1-14 (canceled).

Claim 15 (currently amended): Method for coating weldable plastic and plastic composite substrates (12) with a polar plasma-polymerised layer with a thickness (d) in the nanometer range of between 1 to 100 nm, having multifunctional properties with long-term stability, wherein the process gas contains at least one each of a hydrocarbon compound, which may be substituted, and at least one inorganic gas, comprises coating

(a) in a first zone or stage with process gases which contain at least one hydrocarbon compound, at least one hydrocarbon compound with nitrogen-containing or nitrogen- and oxygen-containing functional groups and/or at least one nitrogen-containing or one nitrogen- and oxygen-containing inorganic gas, and

(b) in a second zone or stage with nitrogen-free process gases which contain at least one hydrocarbon compound, at least one hydrocarbon compound with oxygen-containing functional groups and/or at least one oxygen-containing inorganic gas.

Claim 16 (previously presented): Method according to claim 15, wherein coating is carried out at a process pressure (p) of $10^{-3} \leq p \leq 1,000$ mbar.

Claim 17 (previously presented): Method according to claim 15, wherein coating is carried out at a process pressure (p) of $0.1 \leq p \leq 500$ mbar.

Claim 18 (previously presented): Method according to claim 15, wherein coating is

carried out with process gases, which contain, as organic components, hydrocarbon compounds with up to a maximum of 8 C-atoms, and, as inorganic components, oxygen, nitrogen, hydrogen, carbon dioxide, carbon monoxide, nitrogen oxides, ammonia, at least one halogen and/or at least one noble gas.

Claim 19 (previously presented): Method according to claim 15, wherein at least one of a lower and upper layer (14, 16) is deposited with additional silicon-containing process gases.

Claim 20 (currently amended): Method according to claim 15, wherein coating is carried out with a process gas which contains aliphatic, alicyclic and/or at least one aromatic hydrocarbon compounds, ~~preferably with functional polar groups, such as hydroxyl-carbonyl-, carboxylic acid-, carboxyl ester-, amine-, imine-, amide- and/or conjugated nitrile groups.~~

Claim 21 (currently amended): Method according to claim 19, wherein the ~~nitrogen-containing or nitrogen- and oxygen-containing~~ lower layer (14) contains nitrogen and oxygen and is applied with a first plasma source, ~~and the oxygen-containing~~ upper layer (16) contains oxygen and is applied with a second plasma source, or the ~~notrogen or nitrogen and oxygen containing~~ lower layer (14) and the ~~oxygen containing~~ upper layer (16) are applied from the same plasma source with process gases fed in at various zones or alternating process gases.

Claim 22 (currently amended): Coated substrate (10) with at least two multifunctional layers (14, 16) deposited by means of plasma polymerisation, and made of hydrocarbon compounds, comprising a plasma-polymerised polar layer (14, 16) with a thickness (d) in the nanometer range of between 1 to 100 nm, the plasma-polymerised layer comprises a nitrogen-containing lower layer (14) applied to the substrate (12), and a nitrogen-free, oxygen-containing polar upper layer (16) applied to the substrate.

Claim 23 (currently amended): Coated substrate (10) according to claim 22, wherein the nitrogen-containing or nitrogen- and oxygencontaining lower layer (14) has a proportion of 40 to 90% of the total layer thickness (d) and the nitrogen-free, oxygen-containing polar, upper layer (16) has a proportion of 60 to 10% of the total layer thickness (d), ~~wherein the layer thickness is between 1 to 100 nm.~~

Claim 24 (previously presented): Coated substrate (10) according to claim 23, wherein the nitrogen/carbon and/or the oxygen/carbon ratio present in the plasma-polymerised polar layer (14, 16) made of substituted hydrocarbon compounds is in the range of 0.3 to 0.8, and in the lower layer (14), the nitrogen/carbon ratio is in the same range.

Claim 25 (currently amended): Coated substrate (10) according to claim 23, wherein the polar upper layer (16) has a carbon/oxygen ratio of 0.2 to 0.6 ~~and a permanent surface tension of preferably at least 50 mN/m.~~

Claim 26 (currently amended): Coated substrate (10) according to claim 22, wherein the substrate is ~~welded~~ weldable to a plasma-polymerised polar layer (14, 16).

Claim 27 (previously presented): Coated substrate (10) according to claim 22, wherein the substrate forms a layer (14, 16) for packaging.

Claim 28 (previously presented): Coated substrate (10) according to claim 27, wherein the packaging is for food.

Claim 29 (previously presented): Coated substrate (10) according to claim 27, wherein the substrate forms a protective layer against gases, additives and liquids.

Claim 30 (new): Method according to claim 20 wherein the functional polar groups are hydroxyl-carbonyl, carboxylic acid -, carboxyl ester-, amine-, imine-, amide- and conjugated nitrile groups.

Claim 31 (new): Method according to claim 25 wherein the polar upper layer (16) has a permanent surface tension of preferably at least 50 mN/m.